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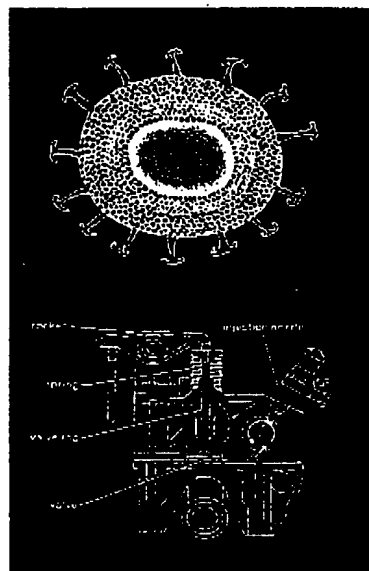
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McGraw-Hill Dictionary of Scientific and Technical Terms

DANIEL N. LAPEDES Editor in Chief

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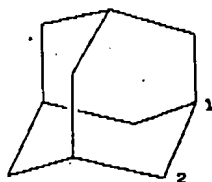
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acute lymphocytic leukemia adaptive control

22

ADAMANTANE



Structure of adamantane showing bridgehead carbon labeled 1 and alternate position for substitution at carbon 2.

by rapid onset and progress, with anemia and hemorrhagic manifestations; immature forms of leukocytes are predominant.

acute lymphocytic leukemia [MED] A severe blood disorder in which abnormal leukocytes are identified as immature forms of lymphocytes. Also known as lymphoblastic leukemia.

acute monocytic leukemia [MED] A severe blood disorder in which abnormal leukocytes are identified as immature forms of monocytes. Also known as monoblastic leukemia.

acute necrotizing hemorrhagic encephalomyelitis [MED] A sudden, severe central nervous system disease with variable symptoms; pathology includes hemorrhages and necrosis of the white matter.

acute nonsuppurative hepatitis See interstitial hepatitis.

acute radiation syndrome [MED] A complex of symptoms involving the intestinal tract, blood-forming organs, and skin following whole-body irradiation.

acute respiratory disease [MED] Severe adenovirus infection of the respiratory tract characterized by fever, sore throat, and cough.

acute rheumatic fever [MED] A severe form of the disease.

acute rhinitis [MED] Inflammation of the nasal mucous membrane due to either infection or allergy.

acute toxic encephalopathy [MED] A severe childhood syndrome characterized by sudden onset of coma or stupor, fever, convulsions, and impaired respiratory and cardiovascular functioning.

acute triangle [MATH] A triangle each of whose angles is less than 90°.

acute tubular necrosis See lower nephron nephrosis.

acute yellow atrophy [MED] Rapid liver destruction following viral hepatitis, toxic chemicals, or other agents.

acutifoliate [BOT] Having sharply pointed leaves.

acutilobate [BOT] Having sharply pointed lobes.

acyclic [BOT] Having flowers arranged in a spiral instead of a whorl.

acyclic [MATH] 1. A transformation on a set to itself for which no nonzero power leaves an element fixed. 2. A chain complex all of whose homology groups are trivial. [PHYS] Continually varying without a regularly repeated pattern.

acyclic compound [ORG CHEM] A chemical compound with an open-chain molecular structure rather than a ring-shaped structure; for example, the alkane series.

acyclic feeding [ADP] A method employed by alphanumeric readers in which the trailing edge or some other document characteristic is used to activate the feeding of the succeeding document.

acyclic machine See homopolar generator.

acyclic motion See irrotational flow.

acyl [ORG CHEM] A radical formed from an organic acid by removal of a hydroxyl group; the general formula is RCO, where R may be aliphatic, alicyclic, or aromatic.

acylation [ORG CHEM] Any process (with the exception of the Friedel-Crafts method) whereby the acyl group is incorporated into a molecule by substitution.

acyl carrier protein [BIOCHEM] A protein in fatty acid synthesis that picks up acetyl and malonyl groups from acetyl coenzyme A and malonyl coenzyme A and links them by condensation to form β -keto acid acyl carrier protein, releasing carbon dioxide and the sulfhydryl form of acyl carrier protein. Abbreviated ACP.

acyl exchange See acidolysis.

acyl halide [ORG CHEM] One of a large group of organic substances containing the halocarbonyl group; for example, acyl fluoride.

acyloin [ORG CHEM] An organic compound that may be synthesized by condensation of aldehydes; an example is benzoin, $C_6H_5COCHOHC_6H_5$.

acyloin condensation [ORG CHEM] The reaction of an aliphatic ester with metallic sodium to form intermediates converted by hydrolysis into aliphatic α -hydroxyketones called acyloins.

AD See average deviation.

ADA See air defense artillery.

adactylous [MED] Lacking fingers and toes.

adalert [GEOPHYS] An advance alert issued by a regional

warning center to give prompt warning of a change in solar activity.

adamantane [ORG CHEM] A $C_{10}H_{16}$ alicyclic hydrocarbon whose structure has the same arrangement of carbon atoms as does the basic unit of the diamond lattice.

adamantine drill [MECH ENG] A core drill with hardened steel shot pellets that revolve under the rim of the rotating tube; employed in rotary drilling in very hard ground.

adamantine spar [MINERAL] A silky brown variety of corundum.

adamantinoma See ameloblastoma.

adambulacral [INV ZOO] Lying adjacent to the ambulacrum.

adamellite See quartz monzonite.

adamite [MINERAL] $Zn_3(AsO_4)(OH)$ A colorless, white, or yellow mineral consisting of basic zinc arsenate, crystallizing in the orthorhombic system; hardness is 3.5 on Mohs scale, and specific gravity is 4.34-4.35.

Adam's apple [ANAT] Common name for the ventral prominence of the larynx formed by the thyroid cartilage.

Adams-Bashforth process [MATH] A method of numerically integrating a differential equation of the form $(dy/dx) = f(x,y)$ that uses one of Gregory's interpolation formulas to expand f .

adamellite [ORG CHEM] $C_6H_4 \cdot NH \cdot C_6H_4 \cdot AsCl$ A yellow crystalline arsenical; used in leather tanning and in warfare and riot control to produce skin and eye irritation, chest distress, and nausea. U.S. army code is DM. Also known as diphenylaminochlorarsine; phenarsazine chloride. [MINERAL] Greenish-black mica.

ada mud [ENG] A conditioning material added to drilling mud to obtain satisfactory cores and samples of formations.

adapertural [INV ZOO] Near the aperture, specifically of a conch.

adapical [BOT] Near or toward the apex or tip.

adaptability test [ORD] A test to ascertain the adaptability of a standardized item or equipment to a particular unit or organization.

adaptation [GEN] The occurrence of genetic changes in a population or species as the result of natural selection so that it adjusts to new or altered environmental conditions. [PHYSIO] The occurrence of physiological changes in an individual exposed to changed conditions; for example, tanning of the skin in sunshine, or increased red blood cell counts at high altitudes.

adaptation brightness See adaptation luminance.

adaptation illuminance See adaptation luminance.

adaptation level See adaptation luminance.

adaptation luminance [OPTICS] The average luminance, or brightness, of objects and surfaces in the immediate vicinity of an observer estimating the visual range. Also known as adaptation brightness; adaptation illuminance; adaptation level; brightness level; field brightness; field luminance.

adaptation syndrome [MED] Endocrine-mediated stress reaction of the body in response to systemic injury; involves an initial stage of shock, followed by resistance or adaptation and then healing or exhaustion.

adapter [ADP] A device which converts bits of information received serially into parallel bit form for use in the inquiry buffer unit. [ENG] A device used to make electrical or mechanical connections between items not originally intended for use together. [MST] A connecting piece, usually made of fireclay, between a horizontal zinc retort and the condenser in which the molten zinc collects. [OPTICS] An attachment to a camera that permits its use in a manner for which it was not designed.

adapter skirt [AERO ENG] A flange or extension of a space vehicle that provides a ready means for fitting some object to a stage or section.

adapter transformer [ELEC] A transformer designed to supply a single electric lamp; its primary terminals are designed to fit into an ordinary lampholder, its secondary terminals into a lampholder of a low-voltage lamp.

adaptive behavior [PSYCH] Any behavior that helps the organism adjust to its environment.

adaptive colitis See irritable colon.

adaptive control [CONT SYS] A control method in which one or more parameters are sensed and used to vary the feedback

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FAX NO. 7032(50

P. 02

PATENT
0649-0710P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Hidekazu SAKAI et al. Conf No.: 3756
Appl. No.: 09/468,538 Group No.: 1752
Filed: December 21, 1999 Examiner: Walke
For: SILVER HALIDE COLOR PHOTOGRAPHIC LIGHT-
SENSITIVE MATERIAL FOR MOVIE

DECLARATION UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Hidekazu Sakai, do hereby declare and state that:

I graduated from Osaka University, Faculty of Graduate
School/ Faculty of Science, Course of Organic Chemistry
receiving a Master's degree in March of 1988;

I have been employed by Fuji Photo Film Co., Ltd.,
since April of 1988 until the present time;

I have been engaged in research and development on the
method for using the organic element for the color
photograph at the Ashigara Laboratories of Fuji Photo Film
Co., Ltd., from 1988 to the present date;

The following comparative experimentation have been
prepared under my supervision: _____

Application No.: 09/468,538

Comparative Experiments

In the following comparative experiments, samples shown in Table A were prepared strictly in the same manner as in Comparison Experiment A' submitted to the USPTO on December 21, 2001, except that the cyan coupler has been changed. The samples were evaluated for sharpness and white background density in the same manner as in the above-mentioned Comparison Experiment A'.

In combination with the results from Table 2-1" in Comparison Experiment A', the following Table A was prepared.

The white background densities displayed in Table A utilize Sample no. 201' as the reference. Also, the alteration of the coating amount of the 4th layer was required to achieve the same cyan density for the same exposure quantity in the individual samples. D' is a sample involved in Comparison Experiment A'.

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P. 04

Application No.: 09/468,538

Table A

Sample No.	Type of solid dye fine dispersion of the 1 st layer	Cyan Coupler of the Present Invention			Sharp ness	White Back-ground Den-sity	Note
		Type	Amount Used (mol %)	Coated Amount of the 4th Layer (%)			
201'	None	None (only C-3 of Fujita)	-	110	16	-	C
Comp. A'	D'	None (only C-3 of Fujita)	-	110	20	0.04	C
Comp. B'	None	41 of Sakai	70	69	24	0.00	C
205'	D'	41 of Sakai	70	69	39	-0.01	I
Comp. C	None	(1) of present app.	70	69	28	0.01	C
20C		(1) of present app.	70	69	40	-0.04	I
Comp. D	None	(2) of present app.	70	75	25	0.00	C

H.S. 4/13/2004

APR-12-2004 MON 02:00 P. KB

FAX NO. 7032 J50

P. 05

Application No.: 09/468,538

Sample No.	Type of solid dye fine dispersion of the 1 st layer	Cyan Coupler of the Present Invention			Sharpness	White Background Density	Note
		Type	Amount Used (mol %)	Coated Amount of the 4th Layer (%)			
20D	D'	(2) of present app.	70	75	38	-0.01	I
Comp. E	None	(25) of present app.	70	73	23	0.00	C
20E	D'	(25) of present app.	70	73	39	-0.04	I

Note: C = Comparative Example
I = Present Invention

According to the above results, Samples 20C, 20D and 20E, all belonging to the present invention, exhibit both high sharpness values (ranging from 38 to 40) and excellent white background density (as low as -0.01 to -0.04). These results are advantageous superior to the results achieved by the Comparative Sample A', which is a combination of publicly known techniques. A review of the results reveals that Comparative Sample A', in which the solid fine particle dispersion is used in conjunction with Sample 201' using a conventional phenol-based coupler, exhibits

Application No.: 09/468,538

enhanced sharpness. However, the degree of enhancement is only 4, and the white background density ^{increases} ~~decreases~~ showing performance deterioration. H.S. 4/13/2004

In comparison to Sample 201', Samples 205', 20C, 20D and 20E of the present invention exhibit noticeable enhancements of sharpness as large as 23, 24, 22 and 23, respectively. This increase is not accompanied by the increase (a disadvantageous result) of white background density.

Additionally, by comparing the differences caused by the type of coupler for the instances where the solid fine particle dispersion of a dye is present and absent from the first layer to be combined in the present application, additional results are obtained.

That is, by comparing Sample 205' of the present invention with Comparative Sample B' (Comp. B'), Sample 205' of the present invention is superior in sharpness by a value of 15.

Also, by comparing Sample 20C of the present invention with Comparative Sample C (Comp. C), Sample 20C of the present invention is superior in sharpness by a value of 12.

Further, by comparing Sample 20D of the present invention with Comparative Sample D (Comp. D), Sample 20D

APR-12-2004 MON 02:01 P. KB

FAX NO. 7032 J50

P. 07

Application No.: 09/468,538

of the present invention is superior in sharpness by a value of 13.

Also, by comparing Sample 20E of the present invention with Comparative Sample E (Comp. E), Sample 20E of the present invention is superior in sharpness by a value of 16.

In contrast to these results, the degree of sharpness improvement for Comparative Sample A' relative to Sample 201' (in which a conventional phenol-based coupler is used) is only 4. Accordingly, the properties achieved by the present invention far exceed any expectation, which might be estimated from a conventional phenol-based coupler.

The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

By Hidekazu Sakai
Hidekazu Sakai
Date April 13, 2004